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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of	)	
	)	
The Establishment of Policies	)	IB Docket No. 99-81
and Service Rules for the Mobile	)	RM-9328
Satellite Service in the 2 GHz Band	)	

JOINT COMMENTS OF HUGHES COMMUNICATIONS GALAXY, INC. AND HUGHES COMMUNICATIONS, INC.

Hughes Communications Galaxy, Inc., licensee of the Spaceway Ka band satellite system,[1] and Hughes Communications, Inc. (together with Hughes Communications Galaxy, Inc., "*Hughes*"), the applicant in the second Ka band satellite processing round for the SpacewayEXP GSO FSS and SpacewayNGSO FSS satellite networks,[2] jointly comment on the Notice of Proposed Rulemaking[3] in the above-referenced docket.

I. INTRODUCTION

As the Commission noted in its NPRM, two of the applicants for 2 GHz MSS systems, Celsat America, Inc. and Iridium LLC, have requested to utilize Ka band spectrum for feeder links for their MSS systems. In its most recent amendment to its application, Celsat

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1 *Hughes Communications Galaxy, Inc.*, 13 FCC Rcd. 1351 (1997).

2 *See* FCC File Nos. SAT-LOA-19971222-00201, 00205, 00207, 00209, 00210

3 *The Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band*, FCC 99-50 (rel. March 25, 1999) (the "*NPRM*").

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requests 850 MHz of spectrum within 27.5 – 30.0 GHz and 850 MHz within 17.7 – 20.2 GHz.[4] Celsat had previously requested 850 MHz of spectrum at 27.5 – 28.35 and 850 MHz of spectrum at 17.7 – 18.55 GHz.[5] Iridium LLC requests (i) 400 MHz of spectrum at 29.1 – 29.5 GHz and 400 MHz of spectrum at 19.3 – 19.7 GHz for feeder links for its MACROCELL system and (ii) a waiver of Commission rule Section 25.258(c) to permit its use of 29.25 – 29.5 GHz.

Hughes's Spaceway satellite system is licensed to utilize 28.35 – 28.6 GHz, 29.25 – 30.0 GHz, 19.7 – 20.2 GHz and 500 MHz within 17.7 – 18.8 GHz at several orbital locations around the world, including the 99° W.L. and 101° W.L. orbital locations over the United States, to provide broadband communications services to end-users. Hughes has also applied in its SpacewayEXP satellite application to utilize similar spectrum bands for communications service links at four orbital locations, including 69° W.L. and 117° W.L. The Commission should reject those portions of the Celsat and Iridium requests that are inconsistent with the 28 GHz Band Plan[6] and Hughes's licensed and proposed systems. Moreover, with respect to Celsat's request, the Commission should not permit GSO MSS feeder links to inefficiently utilize the portion of

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4 Amendment to Application of Celsat America, Inc. at 3, FCC File No. 88-SAT-AMEND-98 (filed December 22, 1997) ("*Fourth Amendment*").

5 Amendment to Application of Celsat America, Inc. at Supplement to Appendix H, FCC File No. 192-SAT-AMEND-97 (filed September 25, 1997) ("*Third Amendment*"). The NPRM indicates that Celsat has requested 850 MHz in 17.7 – 18.35 GHz for feeder downlink spectrum. NPRM at ¶ 50. The NPRM reflects what must be a typographical error in Celsat's Third Amendment, at Tab C, p. 3., and does not reflect the request made in Celsat's Fourth Amendment.

6 *In the Matter of Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5 - 29.5 GHz Frequency Band, to Reallocate the 29.5 - 30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, 11 FCC Rcd 19005, ¶¶ 40, 45 (1996) ("*28 GHz Report and Order*").

the Ka band set aside in the 28 GHz Band Plan for the next generation broadband GSO FSS systems.[7]

As a threshold matter, with respect to Iridium's request to use 29.25 – 29.5 GHz in a way that does not conform with Commission rule Section 25.258(c), the Commission has indicated that it will not address Iridium's request in this proceeding.[8] To the extent the Commission will address Iridium's waiver request in the proceeding on Iridium's application, Hughes refers the Commission to Hughes's Petition to Deny[9] Iridium's MACROCELL application. To the extent the Commission will address this waiver request in another proceeding or in this docket, Hughes notes that the Commission would be required to give public notice of, and the opportunity to comment upon, the Commission's intention to do so.

II. THE COMMISSION SHOULD NOT ACCOMMODATE GSO MSS FEEDER LINKS WITHIN THE KA BAND SPECTRUM DESIGNATED FOR GSO FSS-PRIMARY USE

As noted in the NPRM, the Commission has in the past precluded the use of the conventional FSS C and Ku bands for MSS feeder links.[10] In the case of American Mobile Satellite Corporation ("*AMSC*"), the Commission refused to allow AMSC to utilize the paired

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7 Pegasus and Motorola have made a similar argument in their pleadings in respect of Celsat's application. *See* Consolidated Petition to Deny of Pegasus Development Corporation at 15, FCC File No. SAT-AMD-19980123-00009 (filed May 21, 1999); Comments on Pegasus Petition to Deny of Space System License, Inc. at 1-2, FCC File No. SAT-AMD-19980123-00009 (filed June 11, 1999).

8 NPRM at ¶ 66.

9 Petition to Deny of Hughes Communications Galaxy, Inc., FCC File No. 187-SAT-P/LA-97 (filed December 22, 1997). *See also* Reply of Hughes Communications Galaxy, Inc., FCC File No. 187-SAT-P/LA-97 (filed February 23, 1998).

10 NPRM at ¶ 52 (citing, *inter alia*, *Amendment of Parts 2, 22 and 25 of the Commission's Rules to Allocate Spectrum for and to Establish Other Rules and Policies Pertaining to the Use of Radio Frequencies in a Land Mobile Satellite Service for the Provision of Various Common Carrier Services*, 4 FCC Rcd 6041, 6050 (1989) ("*AMSC Order*")).

500 MHz bands at C and Ku band, which were and continue to be "core" spectrum for domestic FSS communications service links, at a "prime orbit location."[11] The Commission's rationale for this decision was that assigning "core" spectrum at a prime orbit location for feeder link operations would not be an efficient use of the available resources.[12] As stated in the NPRM, use of the "core" spectrum bands for MSS feeder links "would preclude conventional FSS services and inhibit the fungibility of these orbit locations for future FSS assignments."[13]

However, the Commission did permit AMSC to utilize spectrum outside the "core" FSS spectrum at a prime orbital location and also permitted AMSC to utilize a portion of the "core" FSS spectrum at orbital locations on the far eastern and western edges of the orbital arc capable of providing coverage to portions of the United States. The Commission permitted AMSC to use a portion of the extended Ku band, which is used by the terrestrial fixed service and international FSS satellite systems, at the 101° W.L. orbital location[14] and allowed AMSC to use a portion of the conventional Ku band at the 62° W.L. and 139° W.L. orbital locations, which at Ku band are "'fringe' [orbital] locations."[15] Thus, the Commission was able to accommodate AMSC's need for feeder links for its MSS system without impinging on the continued development and utilization of the C and Ku bands for FSS communications services.

The Commission's decision in the AMSC case was the correct one and the Commission should follow a similar policy with respect to the Ka band. The same policy

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11 AMSC Order at ¶ 62.

12 *Id.*

13 NPRM at ¶ 52.

14 AMSC Order at ¶ 68-69.

15 AMSC Order at ¶ 76-77.

concerns that animated the Commission's decision in the AMSC case are present in the case of the Ka band. The deployment of commercial GSO FSS systems at Ka band is imminent and the Commission has recognized that the Ka band spectrum is critical expansion spectrum for GSO FSS operators and is necessary to permit the development of broadband satellite systems. Indeed, the Ka band provides the first real opportunity to provide affordable two-way, broadband satellite services directly to consumers and small businesses, particularly for users who are not now served, and never may be served, by terrestrial broadband service providers.

In fact, from the early phases of the 28 GHz proceeding, both Hughes and the Commission have recognized that the then-proposed, and now-licensed, GSO FSS satellite systems would require access to at least 1000 MHz of Ka band spectrum to develop and deploy their high-capacity broadband service to the broadest possible range of users.[16] Indeed, as part of a carefully crafted compromise band plan, the Commission committed to provide 1000 MHz of paired spectrum to permit the deployment of multiple GSO FSS broadband systems, such as Hughes' Spaceway system.[17] Furthermore, the Commission has licensed twelve GSO FSS systems to provide broadband communications services to the U.S. at orbital locations ranging from 62° W.L. to 147 W.L.[18] Several licensees have announced their plans for deploying their systems, including Hughes, which recently announced the commitment of $1.4 billion for the first phase of the Spaceway system. Eight additional GSO FSS applications to provide

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16 *In the Matter of Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5 - 29.5 GHz Frequency Band, to Reallocate the 29.5 - 30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, 11 FCC Rcd 53, ¶¶ 54,55 (1995).

17 28 GHz Report and Order at ¶¶ 57-58, 78.